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25-BT-41

**M.Sc. IV SEMESTER [MAIN/ATKT] EXAMINATION
MAY - JUNE 2025**

BIOTECHNOLOGY

Paper - I

[Bioprocess Technology]

[Max. Marks : 75]

[Time : 3:00 Hrs.]

[Min. Marks : 26]

Note : Candidate should write his/her Roll Number at the prescribed space on the question paper.
Student should not write anything on question paper.
Attempt all five questions. Each question carries an internal choice.
Each question carries **15 marks**.

Q. 1 Discuss microbial growth and death kinetics with reference to industrially useful micro organisms.

OR

Illustrate various methods of strain improvement to increase yield and other desirable characteristics.

Q. 2 Compare Upstream and down stream processing in bioprocess technology.

OR

Analyze methods that can be used for treatment and disposal of effluent.

Q. 3 Differentiate various modes of Fermentation.

OR

Describe in detail basic design of bioreactor along with analyzing importance of each part.

Q. 4 Apply the microbial processes for production of any one primary metabolite.

OR

Explain industrial process for production of antibiotic (any one).

Q. 5 Assess the importance of Biofertilizer and Bioinsecticides in reducing environmental pollution.

OR

Illustrate the process involved in recovery stability and formulation of bacterial and fungal enzymes.